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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,731	03/25/2004	John A. Cadwalader	013616-0121	5643

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FOLEY & LARDNER
777 EAST WISCONSIN AVENUE
SUITE 3800
MILWAUKEE, WI 53202-5308

EXAMINER

ARTMAN, THOMAS R

ART UNIT PAPER NUMBER

2882

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,731

Applicant(s)

CADWALADER ET AL.

Examiner

Thomas R. Artman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>06/29/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 21 is objected to because of the following: it appears as though that the term “machine” is missing from the end of the second line. Appropriate correction is required.

Claim 39 is objected to because of the following: it appears as though that the claim should depend from claim 37 rather than from claim 35. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 10-21, 23-27 and 37-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Boyd (US 4,977,585).

Regarding claims 1, 19, 37 and 41, Boyd discloses a system and method of attenuating radiation (Figs.2-4), including a shield of radiation attenuating material 21 that is disposed at least partially in front of an opening 33 defined by a gantry 12 to reduce radiation exposure during a CT procedure.

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Further regarding claims 19, 37 and 41, and regarding claim 17, the shield is positioned between medical personnel and the gantry in order to protect them from radiation exposure.

With respect to claims 2, 4, 20, 21, 23, 38 and 39, Boyd further discloses that the shield is coupled on the front portion of the CT machine near the gantry.

With respect to claims 3 and 6, Boyd further discloses that the shield is detachably coupled to the CT machine with fasteners (can be reversibly installed and removed by way of screws and other mounting hardware).

With respect to claims 5, 25 and 40, Boyd further discloses that the shield is coupled to the patient table as well as the gantry (col.2, lines 59, through col.3, line 7; col.3, lines 27-35).

With respect to claim 10, Boyd further discloses that the shield is a solid member 23, 24 that is disposed at least partially in front of the opening defined by the gantry.

With respect to claims 11-13, Boyd further discloses that the shield has at least one slit, specifically a plurality of slits/flaps 28, 29 extending in a substantially vertical direction.

With respect to claims 14 and 26, Boyd further discloses that the shield is substantially rectangular in shape (Fig.2).

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With respect to claims 15 and 16, Boyd further discloses that the shield has a curvilinear edge, and further has a substantially circular shape (Fig.3).

With respect to claim 18, Boyd further discloses that the shield is configured to reduce radiation exposure to the patient (body parts outside of the shielding, see Fig.4).

With respect to claim 24, Boyd further discloses that the attenuation material is a flexible material (portions 27 and 29).

With respect to claim 27, Boyd further discloses that the shield is positionable on both sides of the table (Figs.2-3).

Claims 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Orrison (US 4,938,233).

Regarding claim 28, Orrison discloses a system for attenuating radiation (Fig. 13A), including a shield 130 made of a radiation attenuating material that is configured to be draped over and around substantially all secondary areas of a patient to protect the secondary areas of the patient from radiation exposure (col.13, line 47, through col.14, line 2).

With respect to claim 29, Orrison further discloses that the shield has a missing portion 134 that allows a target area to be examined.

With respect to claim 30, Orrison further discloses that the missing portion is an opening in the shield.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd, as applied to claim 6 above, in view of Shasky (US 2,794,128).

With respect to claim 7, Boyd does not specifically disclose a hook and loop fastener for detachably coupling the shield to the gantry.

Shasky teaches a hook and loop fastener system (Figs.2-3) for detachably coupling a shield to an x-ray source. This method allows for a simpler way to attach the shield such that it can be removed more easily when necessary.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Boyd to use a hook and loop fastener in order to make removing the shield easier as generally taught by Shasky.

With respect to claim 8, Shasky further discloses that the fasteners are provided along a top portion of the shield.

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Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd, as applied to claim 6 above, in view of Jaeger (US 5,900,638).

Boyd does not specifically disclose that the fastener is a snap.

Jaeger teaches the practice of using snaps as detachable couplings for radiation shields (Figs.8 and 9). This method allows for a simpler way to attach the shield such that it can be removed more easily when necessary.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Boyd to use a snap fastener in order to make removing the shield easier as generally taught by Jaeger.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd, as applied to claim 21 above, in view of Lenhart (US 5,006,718).

Boyd does not specifically disclose a shield that is coupled to a patient table at an outer edge of the shield and draped over the side of the table until a bottom portion of the shield is substantially near the floor.

Lenhart teaches such a shield (Fig.1), where the shield is attached to the patient table at an outer edge of the shield and drapes down near the floor, and where the shield provides protection to medical personnel from scattered radiation while providing the ability for multiple personnel to be involved in the procedure without the need for wearing cumbersome shielding garments (col.2, lines 9-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Boyd to have a shield coupled to the patient table and draped over the side of the table and down near the floor in order to provide more convenient and less restrictive shielding to multiple medical personnel involved in the procedure.

Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orrison, as applied to claim 28 above, in view of Still (US 5,038,047).

With respect to claim 31, Orrison does not specifically disclose the use of a fastener for selectively sealing and exposing an opening in the shield.

Still specifically teaches a versatile radiation shield (Figs.1-3) with an opening that uses a fastener (Velcro) for selectively sealing and exposing the opening (flap 11, see Fig.5 and col.4, lines 19-22) in order for the shield to have the flexibility to be used in a variety of examination procedures.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Orrison to use a fastener for selectively sealing and exposing the opening in order to increase the flexibility of the shield for use in a variety of examination procedures as generally taught by Still.

With respect to claims 32 and 33, Orrison further discloses that the shield is configured to cover at least a patient's back, chest and groin, as well as the arms and legs (see Fig.13A). However, Orrison does not teach the practice of protecting the patient's head or neck.

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Still specifically teaches the need for such protection, specifically to protect the many crucial and delicate organs of the brain and neck, and further provides a versatile shield for protecting the head and neck of a patient.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Orrison to have the shield also cover the patient's head and neck in order to protect the brain and other crucial organs of the head and neck.

With respect to claim 34, Orrison discloses a radiation shield that is a combination of a vest and skirt (Figs. 6A, 6B and 7-9). However, Orrison does not disclose the use of a helmet.

Still specifically teaches the use of a helmet (Figs. 1-3 and 5) in order to protect critical organs of the head and neck, such as the brain.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Orrison to have the shield also cover the patient's head and neck in order to protect the brain and other crucial organs of the head and neck.

With respect to claim 35, Orrison does not specifically disclose a system where the target area is exposed by allowing a portion of the system to be moved out of the way while a procedure is conducted.

Still specifically teaches such a system where a portion 11 can be moved out of the way for a procedure and can be moved back for different procedures, thus providing a versatile shielding system.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made for Orrison to have a portion that is movable out of the way for a particular procedure in order to increase the flexibility of the shield for use in a variety of examination procedures as generally taught by Still.

With respect to claim 36, neither Orrison nor Still specifically disclose the use of their shields for CT procedures. However, both Orrison and Still specifically teach throughout both disclosures that the shields are configurable in any shape necessary for the specific procedure that is needed to be performed (see at least col.2, lines 41-44 and col.4, lines 19-22 of Still).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Orrison to configure the shield for use with CT procedures in order to maximize the versatility of the device as generally taught by Still.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Deucher (US 5,097,497) and Lenhart (US 4,581,538) teach the practice of using hoop and loop fasteners for detachable coupling of radiation shields. Maine (US 4,196,355) teaches the practice of using vest and skirt shaped shielding. Hopper (US 6,320,938) and Mun (US 6,456,684) teach various patient shields for CT procedures.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Artman whose telephone number is (571) 272-2485.

The examiner can normally be reached on 9am - 6:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas R. Artman
Patent Examiner



Craig E. Church
Primary Examiner